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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995.258	11/27/2001	Fabrice Marinet	00R027254350	1339

27975 7590 03/22/2007  
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EXAMINER
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REVAK, CHRISTOPHER A

ART UNIT	PAPER NUMBER
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2131

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/22/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No. 09/995,258	Applicant(s) MARINET ET AL.	
	Examiner Christopher A. Revak	Art Unit 2131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17-49 is/are pending in the application.
- 4a) Of the above claim(s) 33-41 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-41 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 November 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of the restriction in the reply filed on December 22, 2006 is acknowledged, claims 33-41 has been withdrawn. An action on claims 17-32 and 42-49 has been issued.

### ***Response to Arguments***

2. Applicant's arguments with respect to the prior art rejection of claims 17-32 and 42-49 have been considered but are moot in view of the new ground of rejection.

### ***Specification***

3. The disclosure is objected to because of the following informalities:

Figures 3a and 3b are referenced in the applicant's specification that does not correspond to the drawings which includes Figures 3 and 3a.

Items #22, #25, #26, and #28 are not described in the applicant's specification in regards to Figure 3.

Appropriate correction is required.

### ***Drawings***

4. The drawings are objected to because Figure 3b is referenced in the applicant's specification, however there is no Figure 3b in the drawings section. Additionally,

Figure 3 exists in the drawings section, but the specification refers to Figures 3a and 3b. It appears that the applicant incorrectly labeled those two figures. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Rejections - 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Art Unit: 2131

6. Claims 17-32 and 42-49 are rejected under 35 U.S.C. 102(b) as being anticipated by Morozumi, U.S. Patent 4,862,237.

As per claim 17, Morozumi discloses of a random signal generator comprising an electronic noise source comprising a folded MOS transistor having a drain-source current with a random component, said folded MOS transistor comprising a drain and a source with a folded channel defined there between, and a circuit for generating a digital signal based on the random component (col. 3, lines 5-22 and col. 9, line 60 through col. 10, line 15).

As per claims 18,26 and 43, it is disclosed by Morozumi that the channel is S-shaped and has a size that is at a resolution limit based upon manufacturing technology (as shown in Figure 14a, #124).

As per claims 19,27, and 44, it is taught by Morozumi that the channel is zigzag-shaped and has a size that is at a resolution limit based upon manufacturing technology (as shown in Figure 14a, #124).

As per claims 20,28, and 45, Morozumi discloses of a reference transistor connected to the folded MOS transistor, the reference transistor receiving gate voltage and a bias current equal to a gate voltage and a bias current applied to the folded MOS transistor for causing the drain-source current therefrom to randomly vary (col. 11, lines 5-23).

As per claims 21,29, and 46, Morozumi teaches of a comparison circuit for comparing the randomly varying drain-source current to a detection circuit (col. 3, lines 5-22 and col. 9, line 60 through col. 10, line 15).

As per claims 22,30, and 47, it is disclosed by Morozumi that the comparison circuit determines a difference between the randomly varying drain-source current and the detection circuit and further comprising an amplifier for amplifying the difference (col. 12, lines 26-46).

As per claims 23,31, and 48, it is taught by Morozumi that the circuit comprises a sampling circuit for sampling the digital signal for providing a random digital word (col. 3, lines 5-22).

As per claims 24,32, and 49, Morozumi discloses of an integrating circuit for maintaining a gate voltage on the folded MOS transistor within a desired range of values (col. 11, lines 5-23).

As per claim 25, the teachings of Morozumi disclose of a random signal generator circuit that comprises a plurality of random signal generators, each random signal generator comprising an electronic noise source comprising a folded MOS transistor having a drain-source current with a random component, the folded MOS transistor comprising a drain and a source with a folded channel defined there between, and a circuit for generating a digital signal based upon the random component. A logic circuit connected to the plurality of random signal generators for combining the digital signals for generating a digital number (col. 3, lines 5-22 and col. 9, line 60 through col. 10, line 15).

As per claim 42, the disclosure of Morozumi recites of a method for generating a random number from an electronic noise source. A folded MOS transistor is provided having a drain-source current with a random component, the folded MOS transistor


comprising a drain and a source with a folded channel defined there between, and a random digital signal is generated based upon the random component (col. 3, lines 5-22 and col. 9, line 60 through col. 10, line 15).

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher A. Revak whose telephone number is 571-272-3794. The examiner can normally be reached on Monday-Friday, 6:30am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz Sheikh can be reached on 571-272-3795. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
CR  
March 19, 2007

CHRISTOPHER REVAK  
PRIMARY EXAMINER

